IN THE SPECIFICATION

Please amend formula 5 at page 16, lines 1-3, as follows:

$$A = \frac{\int_{\lambda_{min}}^{\lambda_{max}} \left[\varepsilon_u(\lambda) - \varepsilon_l(\lambda) \right] d\lambda}{\int_{\lambda_{min}}^{\lambda_{max}} \left[\varepsilon_u^{n_{ref}}(\lambda) - \varepsilon_l^{n_{ref}}(\lambda) \right] d\lambda} \qquad (5)$$

Please amend the paragraph at page 22, lines 13-18, as follows:

Such a configuration corresponds to a multiplexed system. A spectral region $\Delta\lambda_i$ (1 ≤ [[I]] i ≤ n) or channel is allocated specifically to each transducer grating R_i. These various channels are demultiplexed (by an electronic, optical or purely digital method) and the refractive index of the medium surrounding each of the gratings is determined.

Please amend the paragraph at page 23, lines 11-28 , as follows:

The use of blazed gratings for refractometry has the following advantages:

a very low sensitivity to temperature and strain (for example much smaller than that of the long period gratings),

a suitable multiplexing capacity,

a response time of about 1 second, limited only by the computing time of the computer and not by the transducer grating,

the possibility of adapting the measurement dynamics and the sensitivity by choosing the grating parameters in particularly the blaze angle,

the possibility of attaining resolutions of about [[10-5]] 10^{-5},

and

the possibility of making the transducer part operate in reflection.